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REMARKS

Claims 1, 5-18, and 21-23, appear in this application for the Examiner's review and consideration.

Claims 13, 15, and 17, have been amended to clarify that while the insert has a uniform thickness (thickness same throughout the insert), the actual thickness may be of a dimension selected from a specified thickness range.

Claims 24-29 have been cancelled with this response without prejudice to Applicants' right to file one or more continuing applications directed to any subject matter not presently claimed.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claims 1, 5-18, and 21-29 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite. The Applicant has amended claims 13, 15, and 17, to more specifically detail that for this embodiment.

Claims 1 and 5-10, refer to an embodiment wherein the insert has a variable thickness, and that thickness varies from a greater dimension in the inner portion of the insert, to a thinner dimension in the outer areas, as best shown in Figs. 2 and 4.

Claims 11 to 17, refer to alternative embodiments as recited on page 5, line 25, to page 6, line 4. These embodiments have inserts that do not vary in thickness across the respective insert, but have a uniform thickness as recited in claims 13, 15, and 17. However, the actual thickness dimension may be from a specified range. The actual thickness of an insert may be from a thickness range, but whatever thickness is selected, that thickness is uniform across the insert.

The rejection under 35 U.S.C. § 112, second paragraph, is therefore believed to have been overcome. Applicants respectfully request reconsideration and withdrawal thereof.

Rejection Over Ezawa et al.

Claims 1, 5-6, 9-12, 14, and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ezawa et al. (6,334,817).

Ezawa et al. states that an object of their invention is to provide a club head that can be manufactured at a low cost. (Column 1, lines 31-35) Their patent is based on manufacturing a golf club with materials that are admittedly selected because they are less expensive than materials such as titanium.

As previously stated, the Applicant's specification of an oval shape insert is an extremely important part of his claims, especially as it relates to maximizing the Coefficient of Restitution (COR). Although mentioning it, as does virtually every prior art patent, Ezawa et al. does not attempt to develop a club head that will maximize Coefficient of Restitution. Therefore Ezawa does not address the necessity of specific distances between the transition junctions and the perimeter opening, nor does Ezawa et al. recognize, or suggest the importance of the insert of the Applicant's invention being of an oval shape. In the Office Action, the Examiner has not addressed the lack of an oval shape in any of the references cited..

The placing of the insert perimeter at least 0.20 inch from the transition junction is a critical part of Claim 1, especially for maximizing the spring effect produced, while still maintaining a very large sweet spot area. If the 0.20 inch distance is reduced, the weld will be brought closer to the transition junctions, and consequently, the COR will be reduced. However, if this distance is increased, the size of the insert is subsequently proportionally reduced, thereby reducing the resulting sweet spot area, and while the COR would undoubtedly increase, unfortunately it would then exceed the USGA acceptable limit of 0.83. Ezawa et al. does not address this issue and therefore does not provide a club head that is functionally equivalent since their club head makes no attempt to simultaneously maximize COR values and/or the sweet spot. The placement of the insert of Ezawa et al. into the face area is only thought of as a means for reducing the amount of welding that will be required.

As mentioned above, a key design difference between Ezawa et al. and the present invention is that the Applicant claims an oval insert. Ezawa et al. provides an insert that is

of a shape as seen in other prior art patents, whereby inserts conform to the shape of the club face. The importance of recognizing the oval shape of Applicant's insert is that in the make-up of a golf club head, the areas of greatest stiffness are located at the toe and heel points (these are where the crown meets the sole/skirt areas). To create a club with a maximum allowable COR, the Applicant creates a greater distance between the perimeter opening and these stiff points. That is why the Applicant's insert is oval and does not follow the natural contour of the face as they do in patents of the prior art. This increased distance does not exist in Ezawa et al. The Applicant's oval insert design results in the addition of greater club face flexibility which translates into increased COR over a greater area.

The upper and lower sections of the face perimeter of the present invention must be extremely thin to maximize the COR, especially at the transition junctions. The combination of a heavily centered insert with very thin transition junctions, is crucial towards providing a club head with what is called "spring effect", or a very desired trampoline-like quality. Claim 5 addresses this thickness and states that this dimension is approximately 0.08 inch. If this thickness was in the range of the Ezawa et al. patent (approximately 0.22 inch), the "spring-effect" would be negligible, and the COR would be drastically reduced. It's also doubtful that the King Cobra SS™350 golf club would have been selected "Driver of the Year" by GOLFWEEK magazine (December 14, 2002 issue).

Claims 6, 9-12, 14, and 16, are dependent upon what is now believed to be an allowable parent claim. For at least this reason, these claims are believed to be allowable. The Applicant includes claims 9, 11, and 14, as comprising size ranges for club heads that include the driver, and the three and five fairway woods.

Claims 7-8, 13, 15, and 17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ezawa et al. in view of Noble et al. (5,954,596) and Kosmatka (6,338,683). Claims 7 and 8 are based upon the preferred embodiment, wherein the insert has a variable thickness, while claims 13, 15 and 17, are based on alternate embodiments, wherein the respective inserts have uniform thickness (however that uniform thickness may be within a given thickness range). For reasons indicated above, it is suggested by the Applicant that Ezawa et al. does not anticipate the amended claim 1, and the teachings

of Noble et al. and Kosmatka do not cure the deficiencies of Ezawa et al. Noble et al. actually claims a bulge in the face that tapers away from a uniform thickness and double radius. Kosmatka may provide a variable thickness striking plate to improve COR (all state of the art clubs seek to improve upon COR), but Kosmatka doesn't have an insert, but rather a cup shaped face that is welded to the body of the club head in the crown and sole areas.

Claims 18, and 21-29, were rejected under 35 U.S.C. 103(a) as being unpatentable over Ezawa et al. in view of Karsten (5,310,186) and Masghati et al. (4,471,961). The Examiner cites Karsten as teaching the locality of the weight pad and Masghati as using weights to increase the moment of inertia. It is believed by the Applicant that neither of these references teach the Applicant's invention. The Applicant acknowledges that placing a weight in the club head and also placing multiple weights is old. However, the Applicant has discovered that the placement of the weight element directly rearward of the point where the hosel axis and the sole intersect, will greatly increase the performance of ball flight. The ability of the golfer to provide a draw and increased loft, reduces the tendency of the golfer to slice, which is the biggest problem facing the medium to high handicap golfer when using a large head club. Neither Karsten nor Masghati et al., suggests the Applicant's method for placing the weight element. However, the Applicant agrees with the position taken by the Examiner that the position of the weight in the Karsten patent, while not technically positioned as taught by the Applicant, would be close enough to achieve the desired result. Therefore, the Applicant has cancelled claims 24-29. The Applicant believes that claims 18, and 21-23, are based upon an allowable claim and further define that claim, and thereby are allowable for that basis.

The rejection under 35 U.S.C. § 103(a) is believed to have been overcome for at least the above reasons. Applicant respectfully requests reconsideration and withdrawal thereof.

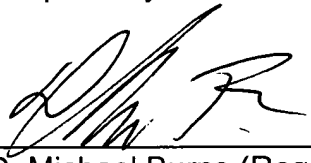
Conclusion

Based on the remarks set forth above, Applicants believe that all of the rejections have been overcome and the claims of the subject application are in condition for allowance. Should the Examiner have any further concerns or believe that a discussion with the Applicants' agent would further the prosecution of this application, the Examiner is encouraged to call the agent at the number below.

No fee is believed to be due for this submission. However, should any required fees be due, please charge them to Acushnet Company Deposit Account No. 502309.

Respectfully submitted,

4/7/04
Date



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